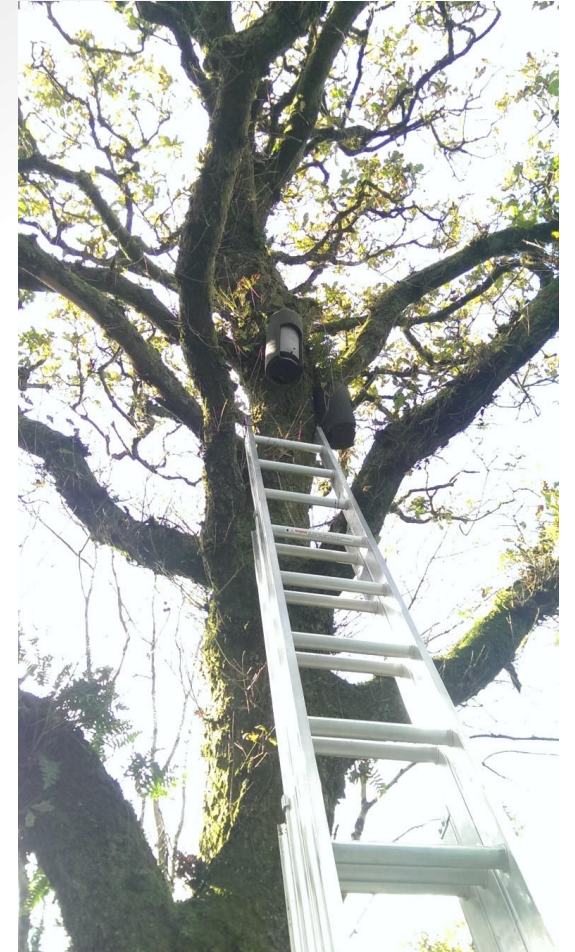


Use of fruit trees as bat roost mitigation for woodland creation

Ian Davidson-Watts

Background

- The need for effective mitigation for woodland bats
- Impacts at the woodland scale
- Habitat approach informed by ALBST



Current mitigation options?

- Short term 0-5 years – bat boxes/reclaimed features? Tree transplants/monoliths
- Mid term 5-50 years – Veteranisation?/more bat boxes
- Long term 50+ years – woodland creation
- Approaches not systematically tested in UK?



Its bigger than just roost structure

- Habitat around roosts
- Microclimate?
- Predation avoidance?
- Initial commuting



Why fruit trees?

- Old fruit trees rarer in the landscape
- Commercial orchards minimise age
- Faster growing - Benefits of earlier natural veteranisation 30 years

Feature Article: Fruit Trees and Their Potential as Medium-Term Mitigation for Roosting Bats

Fruit Trees and Their Potential as Medium-Term Mitigation for Roosting Bats

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Keywords: bat roost, early senescent, fruit, mitigation, PRF, veteran

Early senescent fruit trees develop veteran features much earlier than other tree species. When prescribed as medium-term mitigation for bats, they provide natural Potential Roost Features (PRFs) and a wealth of ecological benefits.

Introduction

Fruit trees enter senescence or 'veteranise' much earlier than most tree species. This means that they start to decay at a younger age, leading to the development of cavities and other features that could provide roosting sites for bats. These features also provide many other wildlife benefits, especially for saproxylic invertebrates (Ivin and Barker 2011). The natural veteranisation of fruit trees is of interest to ecologists looking to add Potential Roost Features (PRFs) to a site as mitigation or compensation for developmental impacts.

In this article, we advocate the widespread planting of fruit trees in new tree planting schemes, and their addition to existing woodland, to provide roost sites relatively



Figure 1. A traditional apple orchard in Shropshire with veteran trees. Photo credit O. Barnett.

typically will only survive in traditional orchards or as individual specimens in gardens, as they become less productive after 15-20 years and are likely to be grubbed up and replaced. Unfortunately, many traditional orchards have been lost

planting density, disease, soil chemistry and drainage, canopy closure from taller surrounding trees, and climate change. For these reasons, ancient fruit trees are rarely found outside a cultivated setting.

Bat use of fruit trees

- Bechstein's
- Daubenton's
- Natterer's
- Pipistrellus
- Brown long-eared



What trees?

- Apple
- Crab Apple
- Wild Cherry



Figure 5. Veteran plum tree.
Photo credit S. Barker.



Wider benefits

- Component of understory-microclimate
- Landscaping
- Wider biodiversity benefits



Figure 1. A traditional apple orchard in Shropshire with veteran trees. Photo credit O. Barnett.

Conclusion

- Fruit trees can support bat mitigation
- Bats will use them- may offer specific opportunities
- Research needed to test approach
- Holistic approach, more than roost availability

